

The Smallest, Wireless, Mobile, and Covert DVR in the World

IV-SGVA™

General Version: IV-SGVA-100, IV-SGVA-200, and IV-SGVA-300

Special Version: IV-SGVA-110, IV-SGVA-210, and IV-SGVA-310

User's Guide



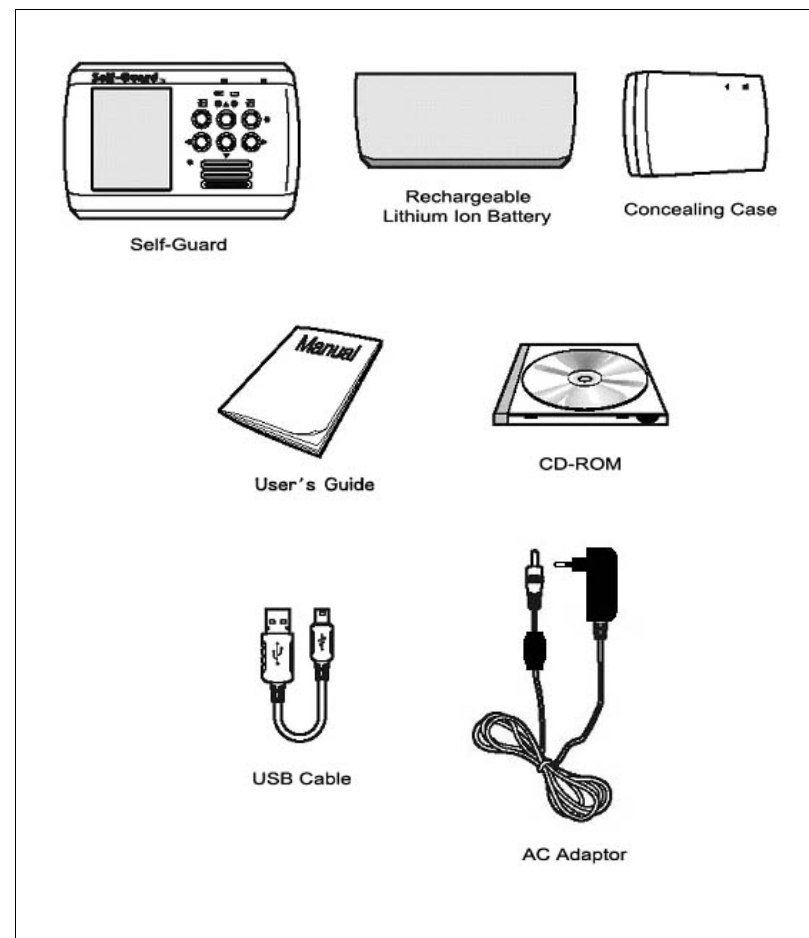
This product is registered with electromagnetic wave standards and can be used for any place including residential area.

Thank you for purchasing this IV-SGVA product.

- Before using it, be sure to read the precautions contained in the User's Guide.
- Keep the User's Guide in a safe place for future reference.
- For the most up-to date information about this product, visit our official website at <http://www.idview.com/>.

Unpacking

Check to make sure that all of the items shown below are included with your IV-SGVA . If something is missing, contact your dealer as soon as possible.



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<< Important Notice >>

- ✓ The contents of this manual are subject to change without notice.
- ✓ IDView.com has the responsibilities as the manufacturer of IV-SGVA to tell to each distributor that using the IV-SGVA unit in the public domain may be in violation of federal privacy statues.
- ✓ IDView.com assumes no responsibility for any damage or loss resulting from the use of this manual.
- ✓ IDView.com assumes no responsibility for any loss or claims by third parties which may arise through the use of the IV-SGVA
- ✓ IDView.com assumes no responsibility for any damage or loss caused by deletion of data as a result of malfunction, repairs, or battery replacement. Be sure to back up all import data on other media to protect against its loss.
- ✓ Note that the example screens and product illustrations shown in this User's Guide may differ somewhat by the screens and configuration of the actual product.
- ✓ The buttons and functions, which are not explained in this manual, are aimed to improve the functions in the future.
- ✓ The features of this product can be changed at any time without notice for the purpose of improvement of the product.

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INTRODUCTION

1. Precautions

◆ General Notice

- The AC/DC adaptor of this product can be used for both 110V and 220V.
- Never try to open the case of the IV-SGVA or attempt your own repairs. High-voltage internal components create the risk of electric shock when exposed. Always leave maintenance and repair work up to a IDView.com authorized service center.
- Never look at the sun or other bright light through the LCD screen. Doing so can damage your eyesight.
- Keep the small parts and accessories of this IV-SGVA out of the reach of small children. If swallowed accidentally, contact your physician immediately.
- Keep the IV-SGVA away from water and other liquids, and never let it get wet. Moisture creates the risk of fire and electric shock. Never use the IV-SGVA outdoors in the rain or snow, at the seashore or beach, in the bathroom, etc.
- Should foreign matter or water ever get into the IV-SGVA, immediately turn it off. Next, remove the IV-SGVA's battery and/or unplug the AC/DC adaptor power cord from the power outlet, and contact your dealer or nearest IDView.com authorized service center. Using the IV-SGVA under these conditions creates the risk of fire and electric shock.
- Should you ever notice smoke or a strange odor coming out of the IV-SGVA, immediately turn it off. Next, taking care you do not burn your fingers, remove the IV-SGVA's battery and/or unplug the AC/DC adaptor power cord from the power outlet, and contact your dealer or nearest IDView.com authorized service center. Using the IV-SGVA under these conditions creates the risk of fire and electric shock. After making sure there is no smoke coming from the IV-SGVA, take it to your nearest IDView.com authorized service center for repair. Never attempt your own maintenance.
- Never use the AC/DC adaptor to power any other device besides this IV-SGVA. Never use any other AC/DC adaptor besides the one that comes with this IV-SGVA.

- Never cover the AC/DC adaptor with a quilt, blanket, or other cover while it is in use, and do not use it near a heater.
- At least once a year, unplug the AC/DC adaptor power cord from the power outlet and clean the area around the prongs of the plug. Dust build up around the prongs can create the risk of fire.
- If the IV-SGVA's case should ever become cracked due to dropping it or otherwise subjecting it to rough treatment, immediately turn it off. Next, remove the IV-SGVA's battery and/or unplug the AC/DC adaptor power cord from the power outlet, and contact your dealer or nearest IDView.com authorized service center.
- Never use the IV-SGVA inside of an aircraft or in any other area where its use is prohibited. Doing so creates the risk of accident.
- Physical damage and malfunction of this IV-SGVA can cause the data stored in its memory to be deleted. Always keep backup copies of data by transferring them to USB memory stick or USB Hard Disk.
- Never remove the battery, disconnect the AC adaptor from the IV-SGVA, or unplug the AC/DC adaptor from the wall socket while a moving image is being recorded. Doing so will not only make storage of the current image impossible, it can also corrupt other image data already stored in the file memory.

◆ When you are not using the external antenna, do not open the cover of this to prevent from getting in other substances into this hole, which may cause problems to the product.

◆ **Test for proper operation before using the IV-SGVA**
Before using the IV-SGVA to record important moving images, make sure you first record a moving image and check the result to ensure that the IV-SGVA is configured correctly and operating properly.

◆ **Data Error Precautions**

Your IV-SGVA is manufactured using precision digital components. Any of the following creates the risk of corruption of data in file memory.

- Removing the battery, flash memory card, or USB memory devices while the IV-SGVA is performing a record or memory access operation.
- Disconnecting the USB cable, removing the IV-SGVA from the Docking

Station, or disconnecting the AC/DC adaptor from the Docking Station while a data communication operation is being performed.

- Low battery power.
- Other abnormal operations.

Any of the above conditions can cause an error. Follow the instructions provided by this manual to eliminate the cause of the error.

◆ **USB Memory Device Precautions**

Do not insert or remove USB memory devices from the USB port in the IV-SGVA while recording or searching. When you remove the USB memory device from the IV-SGVA, you must exit from "RECORD" or "SEARCH" mode, and select "REMOVE USB" from main menu and press [ENT] button. After "REMOVE USB NOW" message appears on the LCD, you can remove the USB memory device from the IV-SGVA.

When you back up the IV-SGVA's data to your computer, first, copy the data in the IV-SGVA to a USB memory device, and then insert that USB memory device to the USB port in the computer to copy the data in USB memory device to the computer. Use only the USB cable provided in the package. It may cause damage to both the IV-SGVA and the computer if you connect the IV-SGVA to the computer using other USB cables directly.

◆ **Flash Memory Card Precautions**

Do not insert or remove the memory card from the IV-SGVA while recording or searching. If you want to remove the memory card from the IV-SGVA, then you must exit from "RECORD" or "SEARCH" mode, before removing the memory card from the IV-SGVA.

◆ **Automatic Power-Off Function**

The IV-SGVA automatically turns off the power or goes into the power-savings mode if you don't press any button for a certain amount of time (1-9 minutes). This does not indicate malfunction of the system.

In "RECORD" and "TRANSMIT" modes, IV-SGVA turns off only the LCD, battery status LAMP, and recording status LAMP to save the battery. But, in the rest of the modes except for "RECORD" or "TRANSMIT", it turns off the

power completely. Set the time to 0 to deactivate "AUTO POWER OFF" function.

Caution: To maximize the life of the battery, do not turn off "AUTO POWER OFF" function.

◆ Operating conditions

This IV-SGVA is designed for use in temperatures ranging from -10°C to +50°C (14°F to 122°F).

Do not expose this product directly to intense sun-light or heat.

Do not expose to rain or extreme humidity or dirty environment.

Keep this product away from extreme vibration or any magnetic devices.

Only use the battery and adaptor provided by us.

Do not open the cover of this product. Otherwise, the warranty will be void.

Before using our product, read the user's guide carefully and become familiar with all the features and warnings associated with this product.

Do not touch this product with wet hands.

◆ Condensation

- When you bring the IV-SGVA indoors on a cold day or otherwise expose it to a sudden change of temperatures, there is the possibility that condensation can form on the exterior or on interior components. Condensation can cause malfunction of the IV-SGVA, so you should avoid exposing it to conditions that might cause condensation.
- To keep condensation from forming, place the IV-SGVA into the Carry-Along Bag before moving it into a location that is much warmer or colder than your current location. Leave it in the plastic bag until the air inside the bag has a chance to reach the same temperature as the new location. If condensation does form, remove the battery from the IV-SGVA for a few hours.

◆ Lens

- Never apply too much force when cleaning the surface of the lens. Doing so can scratch the lens surface.
- Dust or any other soiling of the lens can interfere with proper image recording. You can remove dust particles from the lens surface by using a lens blower to blow them off. Next, wipe the surface of the lens with a soft

lens cloth.

◆ Others

- The IV-SGVA may become slightly warm during use. This does not indicate malfunction.
- If the exterior of the IV-SGVA needs cleaning, wipe it with a soft, dry cloth.

◆ NOTE

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment on and off, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.
- Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

2. Features

IV-SGVA is an extremely small digital recording system, which can digitally compress, store, search, and transmit/receive information such as, image and audio captured by the camera and microphone.

The IV-SGVA defines all the existing technologies of the DVR/CCTV combination, as well as integrating other revolutionary security innovation: Bluetooth.

You can monitor any place from anywhere, because the IV-SGVA transmits image and audio to remote areas using wireless transmit technology. By applying this technology, IV-SGVA is the Ubiquitous security system.

IV-SGVA is a user-friendly system, and a necessity in these days when security comes to our top priority.

- Total Solution in Security System for its most up-to-date technology
- Unlimited Fields of Application
- Easy Covert Operation using the Concealing Case, Button/Pen camera etc.
- Built-In 1 (up to 2) CCD Color Camera
- 2 Built-In Microphones and 1 speaker
- Built-In color LCD (1.8 Inch) for Immediate and Easy Search / Playback
- Intelligent Algorithm for Motion and Audio Detection
- Wireless Transmit and Receive of Digitalized Audio/Video Data
- Subminiature Size (Less than a Cigarette Pack)
- Durable Design for Impacts

- Programmable Settings for the Option in the Menu – You can configure different values for every option in the menu.
- Snapshot Mode
- Built-In (128MB) Flash Memory - Free of Data Loss, Images can be recorded without using a memory card
- Memory Card for Memory Expansion
- Long Recording Time and Data Back-up with the External USB HDD, or USB Memory Stick
- Long Battery Life (A Low-power technology to provide more recording and playback between charges.)
- User-friendly Operation

3. Specifications and Comparison of each Model

3.1 Specifications

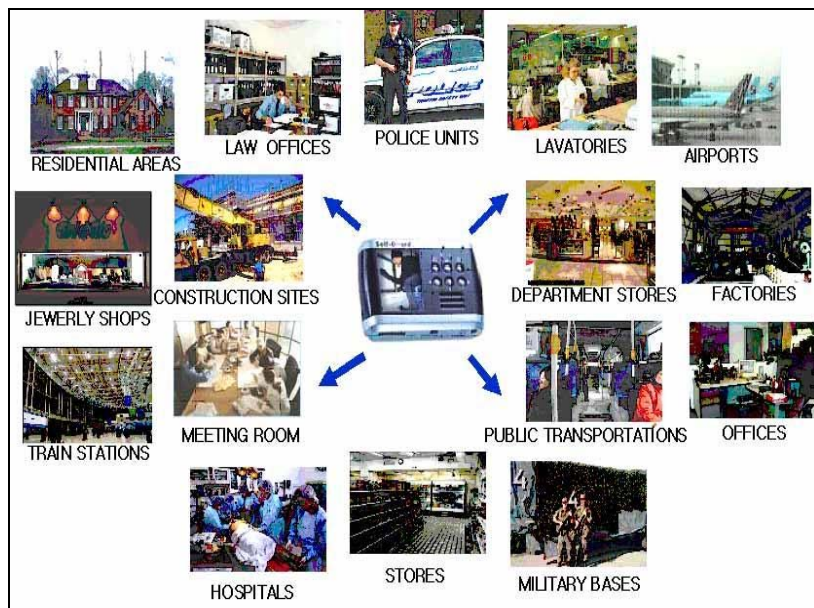
SECTION	DESCRIPTION	REMARKS
Internal Storage Device	Built-In Flash memory: 128 MB (up to 512 MB)	
Memory Expansion	Flash Memory Card: 128MB – 1GB	RS-MMC
Extensive Storage Device & Data Backup	USB Memory Stick, USB HDD	
Built-In Camera	1 CCD Color (up to 2EA)	307,200 pixels
Recording Resolution	up to 640 x 480	pixels
Display Speed	25 fps	
Recording Speed	12 fps	@240 x 240 pixels
Light Sensitivity (Built-In Color Camera)	1 Lux under@f1.2	CCD
Audio Input/Output	2 Built-In Microphones and 1 Speaker	Audio Detection
Video Output	Built-In Color LCD	1.8 Inch 128x160 pixels
Search(Playback)	Date/Time, Motion	
Compression Method	Optimized Algorithm for Security	
Storage Capacity	High Quality (1-2 days) Medium Quality (2-5 days) Low Quality (5-10 days)	128MB, @1fps, 240x240 pixels (Indoor Use)
Display	Date/Time/Frame	
Lens (Built-In Color Camera)	Angle (56 degrees), Unlimited Focus	Pin-Hole Lens
Motion Detection	Digital Image Processing	
Wireless Communication	Bluetooth	
Source of Power	Rechargeable Li- Polymer Battery (3.7VDC, 1400mAh), Adaptor (5V DC, 2A)	
Recording Time (Battery)	Normal Mode (4.5 hours) Power Saving Mode (up to 24 hours) Ultra Power Saving Mode (up to 3 days)	
Dimensions: 85(W) × 55(H) × 22(D) mm Weight (Including Battery) : 116g(4.09oz) 3.34(W) × 2.16(H) × 0.86(D) inch Humidity: Under 80% Operating Temperature: -10 °C to + 50 °C (14°F to 122 °F)		

3.2 Comparison of each Model

Functions	IV-SGVA-100	IV-SGVA-200	IV-SGVA-300	IV-SGVA-110	IV-SGVA-210	IV-SGVA-310
Video Recording	O	O	O	O	O	O
Audio Recording	-	O	O	-	O	O
Wireless Tx/Rx	-	-	O	-	-	O
Video Input	-	-	-	O	O	O

4. Applications

- House, Apartment (Residential Areas), Hotel, School/University Facility, Daycare Center, Kindergarten
- Laboratory, Hospital, Law Office, Museum, Church, Public Library, Commercial Buildings
- Banks, Jewelry Shop, Restaurants, Department Stores, Liquor Stores, Convenience Stores, Book Store, Gas Station
- Factories, Construction Site, Farm, Powerhouse, Parks, Amusement Park, Public Facility
- Fire Department (Fire Fighters), Security Guards, Police Units (Police Officers), Mailman, Jailor
- Military Base (Soldier), Anti-Terror, Special Agents, Airports, Bus Terminal
- Taxi, School Bus, Car, Traffic Signs/Signals, Airplane, Parking Lot, Cash Transporting Truck, Subway
- Courts, Executive Office, Conference Rooms, Governmental Offices, Cultural Property Controlling Office



QUICK START GUIDE

1. Charging the Battery

- Load the battery into the IV-SGVA.
- Plug in the AC/DC adaptor directly into the Power input port of the IV-SGVA.

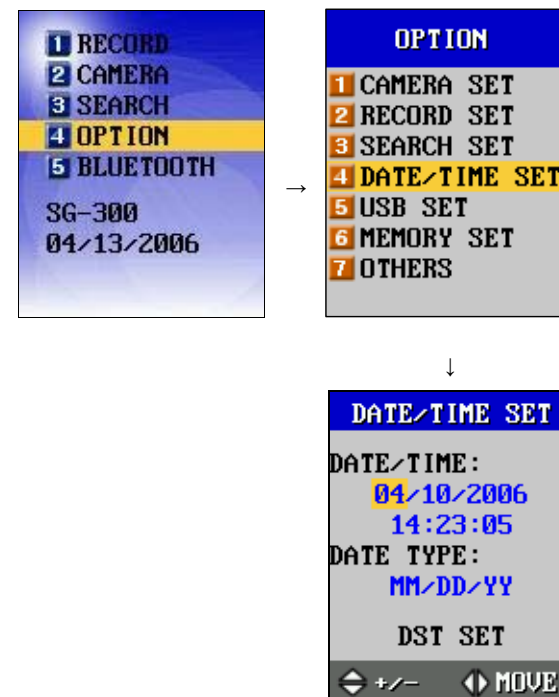
2. Turning the IV-SGVA On and Off

Push [ENT] for 2 seconds to turn on the power.

Push [ESC] for 2 seconds and release it to turn off the power.

3. To Configure Clock Setting

Be sure to configure the following setting before using the IV-SGVA.



1. Press [ENT] for 2 seconds to turn on the IV-SGVA.
2. Use [△] and [▽] to select "4. OPTION" and press [ENT].

3. Use [△] and [▽] to select "D.DATE/TIME SET" and press [ENT].
4. Use [◀] and [▶] to move the cursor to month, date, year, and time.
5. Use [△] and [▽] to change the values for each one.
6. Use [◀] and [▶] to move the cursor to "DATE TYPE".
7. Use [△] and [▽] to select one from 3 types. (DD/MM/YY, MM/DD/YY, YY/MM/DD)
8. Press [ENT] to register the settings and exit the setting menu.
(There are 3 ways to arrange the "DATE TYPE" setting, and it varies in different geographic areas. The types will be changed in a regular sequence of (DD/MM/YY → MM/DD/YY → YY/MM/DD) as you press [△] and [▽].

4. To record a moving image



Use [△] and [▽] to select RECORD, and then press [ENT]. Then, it will appear with the sight that's being recorded as below and the IV-SGVA starts to record images.

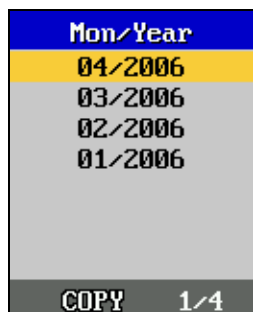


- Before you start to record, be sure to check from the LCD that the camera can capture the sight where you want it to be recorded.
 - Press [ESC] to stop recording and exit from the "RECORD" mode.
 - If you are recording with more than one camera, you can select either a single-channel mode or a 4 channel mode by pressing [▽] button.
- REC AV: Indication of recording both A (Audio) and V (Video).
Shows "REC V" when recording the video only.
 - C1: Camera channel number 1 being used for recording.
If it shows C1345, then 'C' indicates of camera and 1345 indicates for camera channel numbers.
If it shows C1B123, then 'C1' indicates of camera number 1 and 'B123' indicates of Bluetooth channel 1, 2 and 3.
 - 13:40:34: current time.
 - (10): elapsed recording time (10 minutes).
 - 39%: 39 percent of the total memory(Built-in, RS-MMC, USB) is being used for recording.

5. To Playback a Moving image



Use [△] and [▽] to select "SEARCH", and press [ENT]. Then the next screen appears as below.

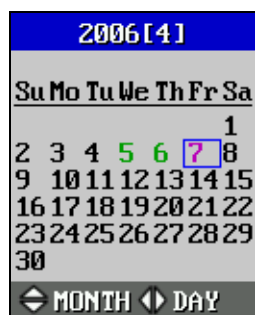


The list of the month and the year, which has recorded data shows on the screen. All saved data are arranged by the month and the year in a list. If there is no data saved on a month, then that specific month will not be included on the list.

COPY: To copy all the data of the selected month to the selected memory device.
(If USB or RS-MMC memory device is not connected to the IV-SGVA, then the cursor does not move to COPY.)

1/4: First of the four pages of the list

Select a Mon/Year, which includes the file you want to playback, and then press [ENT].



- Green Colored Date: There exists saved data.
- Black Colored Date: There exists no saved data.
- Pink Colored Date: Cursor position

Use [◀] and [▶] to select the date you want, and then press [ENT]. Then the list of saved file appears on the screen as below. If you want to view the previous month then press [△] and press [▽] to view the next month.



To move the cursor to the options at the bottom, use [▶] and [◀].

PREV	Go to the previous page
1/3	First of 3 pages
NEXT	Go to the next page
LOCK	Lock from deleting file
DEL	Delete selected file
DELALL	Delete all files for the selected date (except for '*.sgvx' file)
COPY	Copy a selected file to the selected memory
COPYALL	Copy all file of the selected date to the selected memory

There are three colors (blue, red, or green) for each file name to indicate which memory is used to save the data. The indications are as follow.

Color of File Name	Meaning
Blue colored file name	File is stored in built-in memory.
Red colored file name	File is stored in the memory card.
Green colored file name	File is stored in USB memory devices.

The name of the file is composed of hours, minutes, seconds and the camera's channel numbers. For example, '15373501.sgv' means that the file has recorded for 15 hours 37

minutes and 35 seconds from channel number 1. For 15224201.sgvx, 'x' means the file is locked to protect from deleting. To lock or unlock the file, select "LOCK" and press [ENT]. The locked files are not to be deleted before you unlock it. However, locked files can be deleted if you do the format ("OPTION" mode → "6. MEMORY SET" → "2. FORMAT").

'*.sgv' indicates that it is a data of a moving image. '*.sgvx' indicates that it is a locked moving image, and '*.sgp' is a snapshot image.

After selecting the file that you want to view, press [ENT].

Please refer to the General Guide for more details about viewing a moving image.

6. BLUETOOTH (IV-SGVA-300, IV-SGVA-310 Only)

First, choose one IV-SGVA as a SLAVE (to send the images) and the other unit as a MASTER (to receive the images).

Steps to set the IV-SGVA as a SLAVE:

1. For the fastest transmission of the data, set the recording resolution to 128x128.
2. Set "5. BLUETOOTH" -> "B. M/S: **SLAVE**"
3. Check "C. MY ID" and write down the ID.
4. Select "1. RECORD"

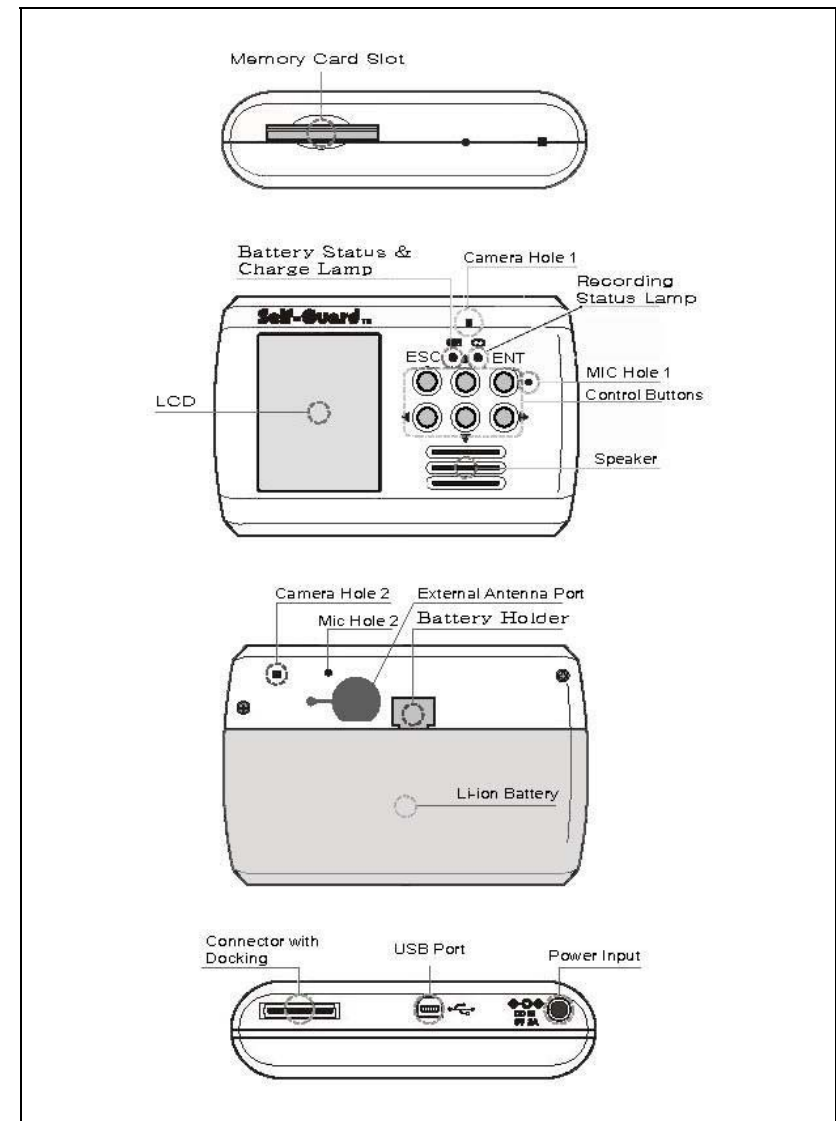
Steps to set the IV-SGVA as a MASTER:

1. Set "5. BLUETOOTH" -> "B. M/S: **MASTER**"
2. Select "A. CONNECT SET"
3. Select "a. BT1/CH#1/OFF"
4. "1.CONNECT: **ON**"
5. "4.00:02:78:0c:60:FF" ->change this ID to the SLAVE's, which you have wrote down for your record in step #3 in the "SLAVE"
6. Select "1. RECORD"

Please refer to the General Guide for more details about BLUETOOTH.

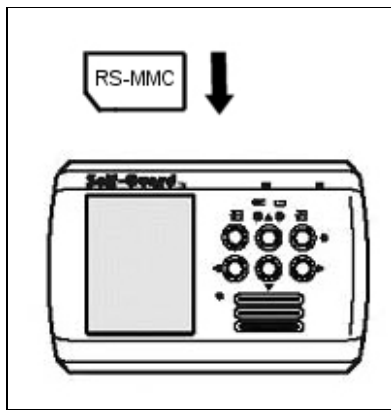
GETTING READY

IV-SGVA



Memory Card Slot: This is the place where you put in the standard RS-MMC memory card. If you need to expand the memory from the built-in, internal memory, you can get this from where you have purchased the IV-SGVA. This product provides a memory card, which lacks in memory.

Cautions: Do not insert or remove the memory card from the slot while recording or searching. If you want to remove the memory card from the slot, then you must exit from "RECORD" or "SEARCH" mode first, before removing the memory card from the slot.



Insertion of RS-MMC Memory Card

Camera Hole 1 (Built-In): IV-SGVA has one built-in CCD camera on the front side of the IV-SGVA. Be sure that this camera hole is not blocked to prevent from the IV-SGVA unable to record the images.

Camera Hole 2 (Optional): IV-SGVA can be installed with another CCD camera on the rear side to record images from the back of the IV-SGVA.

Mic Hole 1 (Built-In): This is where a highly efficient microphone is installed on the front side of the IV-SGVA. Be sure that this hole is not blocked in order to record the audio.

Mic Hole 2 (Built-In): IV-SGVA has second built-in microphone on the rear side. Be

sure that this hole is not blocked in order to record the audio.

Battery Status & Charge Lamp: This lamp indicates how much of the battery is left. Lamp with the green color indicates that the battery is full. The color of this lamp changes into yellow when the battery is half full, and the red color means that the battery is almost used up. If you connect the AC adaptor to the IV-SGVA when the battery is not full, then it automatically charges up the battery to its fullest. While charging the battery, the lamp blinks with the green light. After charging is completed, the lamp stops blinking and you will see the green light indicating that the battery is full.

Recording Status Lamp: This lamp is to check on the recording status. When the IV-SGVA is not in the "RECORD" or "TRANSMIT" mode, the color is green and the color changes into red when the IV-SGVA goes into recording or server mode. In the "RECORD" or "TRANSMIT" mode, the color is still red if there is no motion detected by the IV-SGVA. But when the IV-SGVA detects a motion, then the color turns into yellow, and turns back to red. So if the IV-SGVA continues to detect motions, then the color alternates between red and yellow. If you turn on the audio detection function (OPTION → 6.OTHERS → 2.POWER SET → 7.AUDIO DET), and audio is detected, then this lamp blinks with red color.

Control Buttons

ESC: This button is to go to the previous menu from the current menu, or is to cancel the selected values.

ENT: This button is to go to the selected menu or to apply the changed values.

△: This button is used to move up in the menu or to enter into the image magnification mode in "1.CAMERA", "2.RECORD", and "SEARCH", or to select certain values from the "OPTION" mode.

▽: This button is used to move down in the menu, or to enter into, or to select certain values from the "OPTION" mode.

◀: In the menu, this button is used to move to the left or to select certain values.

▶: In the menu, this button is used to move to the right or to select certain values.

External Antenna Port: This port is to connect external antenna for Bluetooth. You can transmit data about 80 – 100 meters using the built-in antenna. If you use the high gain external antenna, you can increase the transmit range up to several kilometers. And the distance depends on the kind of antenna gain.

Battery Holder: When you load the battery into the IV-SGVA, this place keeps a hold of the battery to the IV-SGVA's body. In order to settle the battery in the IV-SGVA, you need to place the battery onto the back of the IV-SGVA's body, and push the battery to the upper direction. If you want to detach the battery from the body, then press this holder with your thumb, and pull it in downward direction.

Li-ion Battery: Rechargeable battery with 3.7 volts and 1400mAh.

Connector with Docking: It is the port for Professional Version of the IV-SGVA (IV-SGVA-1000, IV-SGVA-2000, IV-SGVA-3000). Do not need in the General Version and Special Version of the IV-SGVA (IV-SGVA-100, IV-SGVA-200, IV-SGVA-300, IV-SGVA-110, IV-SGVA-210/310).

USB Port: You use this USB port when you want to save data for a long period of time or need to back up saved data in the IV-SGVA to the USB memory such as, USB memory stick or USB hard disk. This port has the USB mastering function, so if you connect either a USB memory stick or a USB hard disk into the IV-SGVA, then it automatically detects that and enables you to use those USB memories (USB memory stick and USB hard disk) as a memory expansion or a back up memory.

Cautions: Do not insert or remove USB memory devices from the USB port in the IV-SGVA while recording or searching. When you remove the USB memory device from the IV-SGVA you must exit from "RECORD" or "SEARCH" mode, and select "REMOVE USB" from main menu and press [ENT] button. After "REMOVE USB NOW" message appears on the LCD, you can remove the USB memory device from the IV-SGVA.

When you back up the IV-SGVA's data to your computer, first, copy the data in the IV-SGVA to a USB memory device, and then insert that USB memory device to the USB port in the computer to copy the data in USB memory device to the computer. Use only the USB cable provided in the package. It may cause damage to both the IV-SGVA and the computer if you connect the IV-SGVA to the computer using other USB cables directly.

Power Input: connector for the AC adaptor (DC 5V, 2A).

GENERAL GUIDE

Power ON/OFF

Push [ENT] for 2 seconds to turn on the power.

To turn off the power, push [ESC] for 2 seconds and release it.

Main Menu

When you turn on the power of the IV-SGVA, then a screen appears as below.



I. FUNCTIONS

I-1. RECORD



Select "RECORD" with the direction buttons and then press [ENT]. Then it shows the screen that's being recorded as below, and the IV-SGVA starts to record images. When the IV-SGVA goes into the "RECORD" mode, then the color of recording status LAMP changes into red from green. When the IV-SGVA detects a motion, the color turns into orange. So if the IV-SGVA continues to detect motions, then the color alternates between red and orange.



This function saves images from the cameras, sounds from the microphones and data from the sensors. Before you start to record, be sure to check from the LCD that the camera can capture where you would like to record. In "RECORD" mode, even under the situation of the battery and adaptor power outage, if the power from either of these gets available to the IV-SGVA, then the IV-SGVA automatically turns on its power, and returns to the "RECORD" mode. This function is very useful for the users who are in remote places from their IV-SGVA, and not able to control it immediately.

- REC AV: Indication of recording both A (Audio) and V (Video).
Shows "REC V" when recording the video only.
- C1: Camera channel number 1 being used for recording.
If it shows C1345, then 'C' indicates of camera and 1345 indicates for camera channel numbers.
If it shows C1B123, then 'C1' indicates of camera number 1 and 'B123' indicates of Bluetooth channel 1, 2 and 3.
- 13:40:34: current time.
- (10): elapsed recording time (10 minutes).
- 39%: 39 percent of the total memory(Built-in, RS-MMC, USB) is being used for recording.

Press [▽] to view the images in single mode, or in 4 channel mode. Press [ESC] to stop recording and exit from the "RECORD" mode.

You can access the image and voice of the IV-SGVA, or copy off the data in the IV-SGVA by the wireless communication method (Bluetooth) from a remote IV-SGVA (IV-SGVA-300/310 only). When you connect to the IV-SGVA wirelessly, then you need to know the IV-SGVA's Bluetooth ID.

I-2. CAMERA



Select "CAMERA" with the direction buttons and then press [ENT]. Then the next screen appears in the LCD as below.



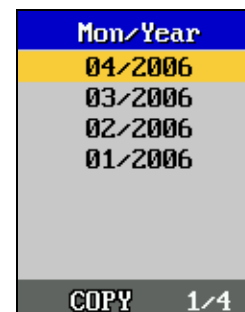
You can check on the camera's recording location, and the operating status of it with the IV-SGVA's LCD. When using multiple cameras, you can see up to 4 images simultaneously from the LCD. Every time you press [▽] in "1.CAMERA" mode, the image from each channel, which is turned on, appears in order. After the last channel shows up in the LCD, it changes into 4 channel mode automatically, and displays four images from the different cameras at once.

You can take a snapshot like with a digital camera by pressing [▷] in this mode. The file name is '*.snp'. You can check on the snapshot files from "SEARCH" mode. In "SEARCH" mode, after stopped from playing, you can go to magnification mode by pressing [△] and then you can get a larger snapshot image by pressing [ENT]. The image is magnified by 4 times (width x 2, and length x 2) for the 240x240 or the 320x240 pixels of resolutions. And if the resolutions are 480x480 or 640x480 pixels, then they are magnified by 16 times (width x 4, and length x 4). You cannot magnify the images in the 128x128 or 160x128 pixels of resolutions. In magnified state for the images, you can use the direction buttons to move to certain portion in the screen. Press [ESC] to escape from the magnification mode.

I-3. SEARCH



Use [△] and [▽] to select "SEARCH", and then press [ENT]. Then the next screen appears as below.



All saved data are arranged according to the month and the year.

Month and the year show on the screen if there exists data saved for that month

Mon/Year: Indication of the data for each month and the year

04/2006: Data exists for the month of April of 2006

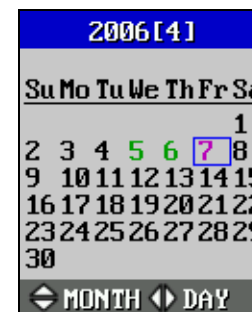
03/2006: Data exists for the month of March of 2006

02/2006: Data exists for the month of February of 2006

COPY: Copy all the data for the selected month to the selected memory (If USB or RS-MMC memory device is not connected to the IV-SGVA, then the cursor does not move to COPY.)

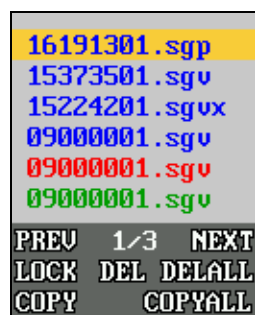
1/4: First of four pages of the list

By using the direction buttons, select the month and the year that you want to search from, and press [ENT]. Then the next screen appears as below. If you want to view the previous month then press [△] and press [▽] to view the next month.



- Green Colored Date: There exists saved data.
- Black Colored Date: There exists no saved data.
- Pink Colored Date: Cursor position

Use [◀] and [▶] to select the date you want, and then press [ENT]. Then the list of saved files appears on the screen as below. If you want to view the previous month then press [△] and press [▽] to view the next month.



To move the cursor to the options at the bottom, use [▶] and [◀].

PREV	Go to the previous page
1/3	First of 3 pages
NEXT	Go to the next page
LOCK	Lock from deleting file
DEL	Delete selected file
DELALL	Delete all file of the selected date (except for '*.sgvx' file)
COPY	Copy selected file to the selected memory
COPYALL	Copy all file of the selected date to the selected memory

There are three different colors (blue, red, or green) for each file name to indicate which memory device is used to save the files. The indications are as follow.

Color of File Name	Meaning
Blue colored file name	File is stored in built-in memory.
Red colored file name	File is stored in the memory card.

Green colored file name	File is stored in USB memory devices.
-------------------------	---------------------------------------

The name of the file is composed of hours, minutes, seconds and the camera's channel numbers. For example, '15373501.sgv' means that the file has recorded for 10 hours 12 minutes and 40 seconds from channel number 1. For 15224201.sgvx, 'x' means the file is locked to protect from deleting. To lock or unlock the file, select "LOCK" and press [ENT]. The locked files are not to be deleted before you unlock it. However, locked files can be deleted if you do the format ("OPTION" mode → "6.OTHERS" → "4.FORMAT").

'*.sgv' indicates that it is a file of a moving image. '*.sgvx' indicates that it is locked moving images, and '*.sgp' is a snapshot image.

After selecting the file that you want to search, press [ENT]. Then the next screen appears as below.



#37: Current frame number being played

143: Number of total frames

+ : It alternated between + and - while playing the audio

09:09:49 : Current playback time from the recorded file

(48) : Total recorded time (48 minutes)

C1 : Camera number being played

■ : Current playing time position in total recorded time frame

|<: Go to the Start of the file

>|: Go to the End of the file

<<: Move backward by 30 frames

>>: Move forward by 30 frames

|>: Move forward by 1 frame

||, -, => : Stop, Play, High-Speed Play; If you press the [ENT], then the status bar changes to "-> (Play)" from the stopped status. If you press the [ENT], then the status bar changes to "=> (High-Speed Play)" from the Play status. If you press the [ENT], then the status bar changes to "-> (Play)" from the High-speed Play status. If you want to stop from Playing or High-Speed Playing, then press [ESC].

New files are created every hour on the hour. But if the file size exceeds 10 Mega bytes, then it automatically makes a new file even if the time is yet to be on the hour. If there is no motion at all, then there will be no file created. While playing the file, you can control the volume of the speaker by pressing [◀] to make it quieter or [▶] to make it louder. Press [ESC] to escape from playing the file. Press [ESC] again to go to the previous menu.

If you have recorded something with multiple cameras simultaneously, then the screen displays in 4-channel mode as you go into the playback mode. Press [▽], to switch into single channel mode, and the image saved from camera 1 will only show in a larger screen. Repeat pressing [▽] to see the rest of the camera channels one by one. After showing the last camera's data in a single channel mode, it switches into 4-channel mode, and plays 4 camera channels simultaneously again as you press [▽].

While playing the file, use [△] to magnify the image.

If you stop playing the files and press [△], then the LCD screen is divided into several blocks for you select the area that you want to magnify. When you select the block that you want to magnify and press [ENT], then it goes into the magnification mode centering the block that you have chosen.

The resolution of the current file appears on the lower left side of the magnified screen, and the magnification ratio appears on the lower right side of the LCD screen.

In the magnification mode, you can move to the left, right, up, and down by using the direction buttons, and press [ENT] to change the magnification ratios, and the ratios repeat $x 1 \rightarrow x 4 \rightarrow x 16$, as you press [ENT] continuously.

In 480x480 and 640x480 resolutions, it is possible to magnify the images up to 16 times (width $x 4$ and length $x 4$), and the magnifying order is $x 1 \rightarrow x 4 \rightarrow x 16$. But, in 240x240 and 320x240 resolutions, you can magnify the images by 4 times only (width $x 2$ and length $x 2$), and the magnifying order is $x 1 \rightarrow x 4$. You cannot magnify the images in 128x128 and 160x128 resolutions. To escape from the magnification mode, press [ESC].

I-4. OPTION



Select "OPTION" using the direction buttons, and then press [ENT]. Then the next screen appears in the LCD as below.



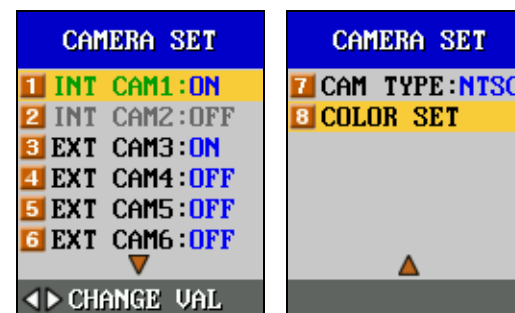
Use [△] and [▽] to select an option and press [ENT]. Then the window displays with next options related to the previous option menu for you to change the values. To change the values, use [▷] and [◁].

4-1. CAMERA SET



Select "1.CAMERA SET" using the direction buttons, and press [ENT]. Then the next screen appears in the LCD as below.

In order to return to the previous menu, press [ESC].



IV-SGVAs have one built-in camera in the front, and can add one more internal camera in the back. You can connect up to four more external cameras to your IV-SGVA through the camera input cable (SG-110, SG-210 and SG-310 only). You can use only one external camera at a time. And you can connect button-hole camera (SG-911) to your IV-SGVA (IV-SGVA-110/210 and IV-SGVA-310 only). You can turn on and off each camera. If there is only one built-in camera and no camera is connected to the IV-SGVA, then you cannot turn off the built-in camera. There should be at least one camera connected besides the built-in camera to the IV-SGVA if you want to turn off the built-in camera.

Regardless of whether the cameras are turned on or off in the menu, if the cameras are connected to the IV-SGVA, then those specific camera numbers in the menu shows with green color.

Be sure to turn off the cameras that are not connected to the IV-SGVA in the menu.

The types of external cameras can be set either in "NTSC" or "PAL".

Select "8.COLOR SET" to change the brightness("BRIGHT"), hue("HUE"), saturation("SATURATION"), and contrast("CONTRAST") of the cameras connected.

Press "8.COLOR SET" and press [ENT], then the next screen appears in the menu as below.



If each one of the internal cameras is turned on, then that camera's number ("1.INT CAM1", "2.INT CAM2") appears on the menu screen. But when one of the external camera is turned on, then the "3.EXT CAM" appears on the menu screen. For the internal cameras, you can only change the brightness ("BRIGHT"), and for the external cameras, you can change all the values for "HUE", "SATURATION", and "CONTRAST". Select the camera that you want to change the value with, and press [ENT], then the selected camera's brightness value appears on the bottom of the screen. Using [◀] and [▶], set the value from 1 (darkest) to 20 (brightest). Using [△] and [▽], change the values for "HUE", "SATURATION", and "CONTRAST", and the range for the values is from 1 to 20.

4-2. RECORD SET

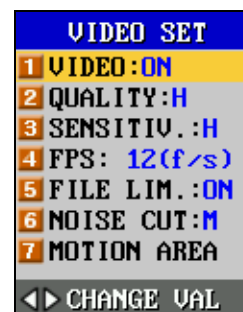


Select "2.RECORD" using the direction buttons, and press [ENT]. Then the next screen appears in the LCD as below.



4-2-1. VIDEO SET

Select "a.VIDEO SET" using the direction buttons, and press [ENT]. Then the next screen appears in the LCD as below.



4-2-1-1. VIDEO

This function turns on and off recording moving images.

Set it to off to record audio only (IV-SGVA-200/210, IV-SGVA-300/310 only).

4-2-1-2. QUALITY (Image Quality)

There are five image quality levels (LL, L, M, H, and HH). If you set this level to "HH", then you get more clear images than in other levels, but a larger file size will result. On the other hand, if you set the level to "LL", then it requires smaller file sizes, but you get less clear images compared to the images in "HH". For example, if you set the level to "LL", then the IV-SGVA continues to record for 4 days. But, if you set the level to "HH" for more clear images, then recording time can last about 2 days. This recording time depends on different recording situations.

4-2-1-3. SENSITIV. (Motion Sensitivity)

This function is to control the sensitivity levels for the motion detection. There are five sensitivity levels (LL, L, M, H, and HH), and you can decrease or increase this level by pressing [◀] or [▶]. If you set this sensitivity level to "LL" and start to record, then the sensor detects only the large objects' movements, and the file size gets smaller. In contrast, if the sensitivity level is in "HH", then the sensor can detect even the very small motions, but the file size gets bigger. The reason for controlling this sensitivity level is that you may not want to record small motions that are unnecessary to you. Suppose that you are in an office and placed a IV-SGVA to monitor the people coming in and out of the office, but with the "HH" sensitivity level, IV-SGVA records unnecessary small motions of the people in the office, such as, moving their hands. In this situation, IV-SGVA records too much of data and the file size gets bigger for all those small motions recorded, and it will take much more time for you to search the data that you want. In addition, the available memory left for later decreases as the file size gets bigger, and the battery fades quickly.

4-2-1-4. FPS (Recording frames per second)

Recording frames per second (FPS) depends on the different values for the Image Resolution.

Image Resolution	Recording Speed (FPS)
128 x 128	1 - 15

160 x 128	1 - 15
240 x 240	1 - 12
320 x 240	1 - 10
480 x 480	1 - 5
640 x 480	1 - 4

4-2-1-5. FILE LIM.

This is to turn on and off the function to limit file sizes being recorded. If this function is turned ON, then a file gets created for every hour or 10MB of file size while recording images. When you want to start recording by pressing ENT button and stop from recording by pressing ESC button regardless of the file size, turn this function to OFF. You are automatically deactivating OVERWRITE function when this function is turned OFF.

4-2-1-6. NOISE CUT

In the dark place, there happens many noise of image from the camera. The motion detection algorithm recognizes that noise as a motion and records the noise even if there was no actual motion. IV-SGVA can cut this noise using the highly-efficient noise cancellation algorithm. There are five noise cutting levels (LL, L, M, H, HH). If you set this level to "LL", then the IV-SGVA cuts the low-level noise only. And if you set this level to "HH", then the IV-SGVA cuts so far as the high-level noise.

Most of the noise can be cut by setting this level to "M", but sometimes, there could be high-level noise depending on the kinds of cameras. In that case, you can set this level to "H" or "HH" to cut the noise.

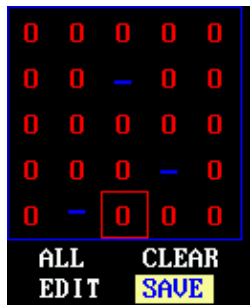
At dawn, the light becomes bright from dark, generating a lot of noise when the IV-SGVA is in such circumstance. And the IV-SGVA may recognize those noises as a motion. In this case, you can set this level to "H" or "HH" to cut the noise.

However, if you set the level to "H" or "HH", then the motion detection algorithm of the IV-SGVA may recognize the actual small motions as noise, and does not record those small motions. So, set the level to "M" except for the special cases.

4-2-1-7. MOTION DETECT (Motion Detection)

Out of the whole recording area from the camera's view, this function is used when you want to detect motions for the specific areas that you have selected only. The whole recording area is divided into 16 (128x128), 20 (160x128), and 25 (240x240, 320x240, 480x480, and 640x480) blocks depending on the resolution. You can move the cursor

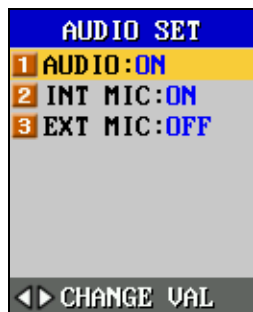
among from the blocks by using the direction buttons, and press [ENT] to select (red colored O) or cancel (blue colored -) specific blocks. After selecting all the blocks for the motion detection, press [ESC] to escape from the "EDIT" mode and to go to the four options below. Select "SAVE" and press [ENT] to save the selected blocks.



ALL: Select all blocks
 CLEAR: Cancel all blocks
 EDIT: Select/Cancel blocks
 SAVE: Save and Exit

Caution: If you select "CLEAR" and save it by pressing [ENT], then the IV-SGVA does not record any images even if there is a motion, because no area is selected for the IV-SGVA to detect the motions. Accordingly, be sure to select at least one block in order for the IV-SGVA to detect and record the images.

4-2-2. AUDIO SET (IV-SGVA-200/210, IV-SGVA-300/310 only)



This function turns on and off audio recording function, and you can select either a built-in microphone or an external microphone. When you turn on "3.EXT MIC", be sure that there is an external microphone connected to the external microphone input port to record audio. Set off "1.AUDIO" to record video only.

4-2-3. SIZE (Image Resolution for Recording)

This function adjusts the resolution of images. The ranges of the resolution are 128x128, 160x128, 240x240, 320x240, 480x480, and 640x480 pixels.

4-2-4. ZOOM

When this function is set to ON, and recording with built-in camera(s), then you can record images with a Zoom-In function. This Zoom-In function can be used for the image resolutions of 128x128, 160x128, 240x240, and 320x240. In 128x128 and 160x128, you can magnify by 16 times of the image recorded, and by 4 times in 240x240 and 320x240.

4-2-5. OVERWRITE (Overwrite when memory is full)

If you set this Overwrite function to on, then the oldest file in dates gets replaced by the new file being recorded, enabling the IV-SGVA to continue to record when the memory is full. If this function is off, and the memory is full with the existing files, then the IV-SGVA stops from recording the images, and returns back to the initial menu mode, displaying "STOP! MEM FULL" on the LCD screen. Press any button to remove this message from the screen. If "1.AUTO OFF" ("4. OPTION" mode → "6.OTHERS" → "3.POWER SET") is not set to "0 minute" but instead, set to "1-9 minutes", then the IV-SGVA automatically turns off its power after selected time gets elapsed.

Types of Memory	BUILT-IN	RS-MMC	USB
	Built-in Flash Memory	Additional Memory Card	USB Memory Stick or USB Hard Disk

Memory Usage Sequence when "OVERWRITE" is "ON"

BUILT-IN	RS-MMC	USB	Memory Usage Sequence
O	-	-	BUILT-IN → BUILT-IN
O	O	-	BUILT-IN → RS-MMC → BUILT-IN

O	-	O	BUILT-IN → USB → BUILT-IN
O	O	O	BUILT-IN → RS-MMC → USB → BUILT-IN

When “5.FILE LIM.” function is turned OFF, you cannot make “OVERWRITE” function turned ON. To turn ON “OVERWRITE” function, it is required to turn ON “5.FILE LIM.” function first.

Memory Usage Sequence when “OVERWRITE” is “OFF”

BUILT-IN	RS-MMC	USB	Memory Usage Sequence
O	-	-	BUILT-IN → Stop
O	O	-	BUILT-IN → RS-MMC → Stop
O	-	O	BUILT-IN → USB → Stop
O	O	O	BUILT-IN → RS-MMC → USB → Stop

4-2-6. SCHEDULE

You can program the IV-SGVA to reserve recording time schedule in 4 time frames for a day. Press [◀] or [▶] to turn ON and OFF each schedule. You can preset each schedule by pressing the [ENT]. If you turn off all options in the schedule menu, then the IV-SGVA turns on “1.ALL DAY” automatically. If you go into the Record Mode outside of the preset recording time, then the LCD displays with “CHECK SCHEDULE” message for 5 seconds, and goes into the sleep mode. When the time becomes for the preset time schedule, IV-SGVA exits from the Sleep mode and starts to record. If you press [ESC] or [ENT] when the IV-SGVA is in the sleep mode, then the LCD will display with a message, “CHECK SCHEDULE” for 5 seconds. During this message is displayed on the LCD, if you press [ESC], then IV-SGVA exits from the sleep mode and goes into the menu mode. If you do not press [ESC] for that 5 seconds, then the IV-SGVA keeps its sleep mode.



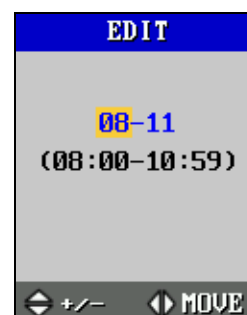
1. ALL DAY

If you turn on this option, then the IV-SGVA records for 24 hours, all day long continuously.

2. 08-11 : OFF

Recording time schedule number 1.

Press [ENT] then the next screen appears in the LCD as below. You can change for the time using direction buttons.



3. 11-14 : OFF

Recording time schedule number 2.

4. 14-17 : OFF

Recording time schedule number 3.

5. 17-20 : OFF

Recording time schedule number 4.

4-3. SEARCH SET



Select "3.SEARCH SET" using the direction buttons, and press [ENT]. Then the next screen appears in the LCD as below.



4-3-1. REPEAT: OFF

If you turn on "a. REPEAT", then it keeps repeating playback the file. When it is turned off, then the file stops from playing after its first playback.

4-3-2. AUDIO: ON

If you turn on "b. AUDIO", then "c.BT AUDIO" automatically becomes "OFF", and plays the audio recorded by the microphone (internal or external). If you turn off "b.AUDIO", and select one of the Bluetooth channel (BT1 – BT 7), then the audio for the selected

channel gets played from the speaker. If you turn off both for the "b.AUDIO" and "c.BT AUDIO", then only the video will play without the audio.

4-3-3. BT AUDIO: OFF (IV-SGVA-300/310 only)

You can select one from the 8 options (OFF, BT1 – BT7). If you select OFF for "c. BT AUDIO", then the IV-SGVA does not play the audio recorded by the slave IV-SGVA via Bluetooth. If you select one from BT1 to BT7, then "b.AUDIO" automatically becomes "OFF", and the audio from a Bluetooth channel gets played. If "c.BT AUDIO" is OFF and

"b.AUDIO" is ON, then the IV-SGVA play the audio recorded by the microphone. If you turn off both for the "b.AUDIO" and "c.BT AUDIO", then only the video will play without the audio.

4-3-4. FASTAUDIO: OFF

If you turn on "c. FASTAUDIO", then the audio and video plays together during the High-Speed Play. When it is turned off, then only the video plays during the High-Speed Play.

4-3-5. TIME SYNC: OFF

Time Sync function decides on whether to playback each file saved from different cameras synchronized with the time. During playback, you can switch between 4-channel mode and single channel mode by pressing [▽]. If you turn on Time Sync function, and change the channels in a single-channel mode one by one and play it, then the time frames of each file gets automatically synchronized with all files as you press "-> (Play)", so that that you can play from the same position stopped from the other camera.

In the time frame, if there is no saved image for a certain position (time) from camera 2 to be synchronized with camera 1, then the time frame bar for camera 2 moves to its closest position to that certain time. If this function is turned on and you switch into 4-channel mode from single-channel mode, then all four files are synchronized with time. If this function was turned off, and you have played each file in the single-channel mode and stopped in different positions in the time frame bar, but switch into 4-channel mode, then it takes about 2 to 3 seconds for all the files to be synchronized with the time. And the screen displays with the message, "Sync..." for that time.

If you turn off the Time Sync function, then it does not synchronize with the time even if you change the channels by pressing [▽], or press “-> (Play)” or “|> (Move forward by 1 frame)” after changing the channel. But, if you switch into 4-channel mode and press “-> (Play)” or “|> (Move forward by 1 frame)”, then the files are synchronized with the exact or closest time regardless of the Time Sync ON, OFF. The reason for synchronizing all the files with the time is to match the video with the audio being played.

4-3-6. SYNC MSG: ON

This function is to decide whether to display the message, “Sync...” on the screen while synchronizing the files.

4-4. DATE/TIME SET



Select “4.DATE/TIME SET” using the direction buttons, and press [ENT]. Then the next screen appears in the LCD as below.



Using [◀] and [▶], you can move the cursor to the Date, Month, Year, and the Time. Use [△] and [▽] to change the variables.. There are three ways to arrange this DATE/TIME setting, and it varies in different localities.

Move the cursor to “TYPE” using [◀] and [▶], and press [△] and [▽] to change among three different types. The types will be changed in regular sequence (DD/MM/YY → MM/DD/YY → YY/MM/DD) as you press [△] or [▽]. Press [ENT] to register the settings.

4-5. USB SET



Select “5.USB SET” using the direction buttons, and press [ENT]. Then the next screen appears in the LCD as below. To go to the previous menu, press [ESC].



This option turns on and off the USB function. When you are not using the USB memory device, turn it off to save the battery. Do not insert or remove USB memory devices from the USB port in the IV-SGVA while recording or searching.

When you connect an USB memory device to the IV-SGVA, a new menu ("REMOVE USB") will appear in the main menu as below.



When you remove the USB memory device from the IV-SGVA, you must exit from "RECORD" or "SEARCH" mode, and select "REMOVE USB" from main menu and press [ENT] button.

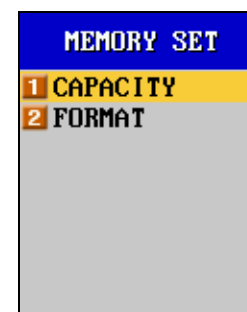
Cautions: Do not insert or remove USB memory devices from the USB port in the IV-SGVA while recording or searching. When you remove the USB memory device from the IV-SGVA, you must exit from "RECORD" or "SEARCH" mode, and select "REMOVE USB" from main menu and press [ENT] button. After "REMOVE USB NOW" message appears on the LCD, you can remove the USB memory device from the IV-SGVA.

When you back up the IV-SGVA's data to your computer, first, copy the data in the IV-SGVA to a USB memory device, and then insert that USB memory device to the USB port in the computer to copy the data in USB memory device to the computer. Use only the USB cable provided in the package. It may cause damage to both the IV-SGVA and the computer if you connect the IV-SGVA to the computer using other USB cables directly.

4-6. MEMORY SET



Select "MEMORY SET" using the direction buttons, and press [ENT]. Then the next screen appears in the LCD as below.

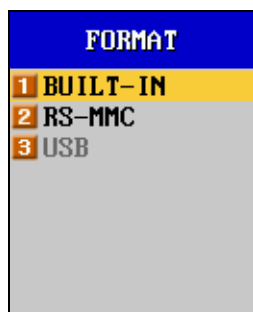


4-6-1. CAPACITY



This information lists total capacity and used memory of each memory device.

4-6-2. DATA FORMAT

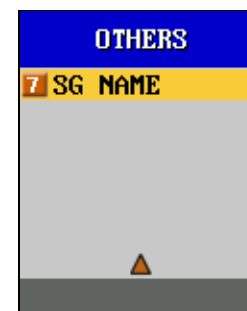


"DATA FORMAT" is to format the memories, and clear all the files saved in the memory. Note that this memory format function deletes the files even if they are locked from deleting in "SEARCH". There are three types of memories you can format; "BUILT-IN", "RS-MMC", and "USB". "BUILT-IN" is the built-in, internal memory of the IV-SGVA. "RS-MMC" is the extensive memory device placed on the top of the IV-SGVA, which can be inserted or removed by the user. And the "USB" memory is inserted into the USB port of the IV-SGVA. IV-SGVA detects the existence of the extensive memory devices in the IV-SGVA, and you will not be able to select the memory's name, if it is not in the IV-SGVA. If there are no "RS-MMC" and "USB" memories in your IV-SGVA, then the IV-SGVA detects that and, you will not be able to select those memory names in the menu to format.

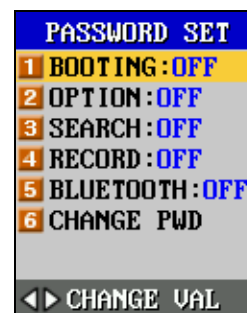
4-7. OTHERS



Select "7.OTHERS" using the direction buttons, and press [ENT]. Then the next screen appears in the LCD as below.



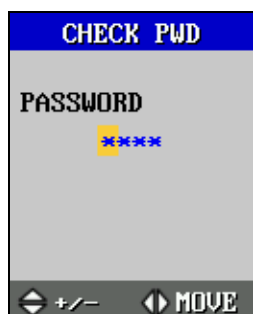
4-7-1. PASSWORD SET



You can prohibit people without the authority from accessing the IV-SGVA by creating a password for each function (BOOTING, OPTION, SEARCH, and RECORD). You can turn each function on and off in "CHANGE PWD".

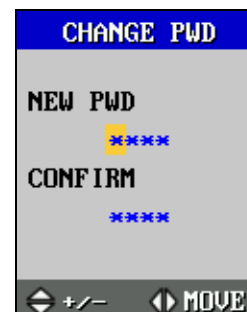
Functions	When each function is set with a password
BOOTING	Put in the password for the IV-SGVA to operate when you turn it on.
OPTION	Put in the password to change various settings or options.
SEARCH	Put in the password to search the data.
RECORD	Put in the password to start recording.
BLUETOOTH	Put in the password to access other IV-SGVAs via BLUETOOTH

The initial default password is "0000". To change the password, first, put in the password that you have been using so far, and then put in the new password.



The password reads as "****" as you put in the password. Using [△] and [▽], choose a number for your password, then the number reads as '*', and the cursor moves to the next position as you press [▷]. After you complete putting in all the numbers press [ENT], and repeat the same process until you complete putting in all the numbers for the password. Once you put in the correct value that matches with the old password, you will be asked to put in the new password. Repeat the same process as above, and enter the same password again to confirm the new password. You must press [ENT] to

save the new password. If you press [ESC] after putting in the new values, then the password cannot be saved.



4-7-2. POWER SET



4-7-2-1. AUTO OFF: 5min

The IV-SGVA automatically turns off the power or goes into the power-savings mode if you don't press any buttons for a certain amount of time (0-9 minutes).

In "RECORD" and "TRANSMIT" modes, IV-SGVA turns off only the LCD, LAMP for the battery status and the LAMP for the recording status to save the battery. But, in the rest of the modes besides "RECORD" and "TRANSMIT", it turns off the power completely. Set the time to 0 to deactivate the "1. AUTO OFF" function.

4-7-2-2. SAVE AC: OFF

This function is to save the power by using the low-powering technology. If there is no motion then the IV-SGVA goes into the sleep-mode. After 2 seconds have elapsed,

the IV-SGVA wake up and check if there is a motion. If there is no motion then the IV-SGVA goes into sleep-mode again, but if there is a motion then the IV-SGVA start to record.

This low-powering technology is very important when you are using the battery as power source for the IV-SGVA. But, if you use the AC power for the IV-SGVA to operate, then this low-powering technology is not much helpful to you.

Suppose that if you want to record for a long time and there is no AC power then you need another battery to operate the IV-SGVA for such a long time. If you get battery with 5 volts output then you can connect that battery to the AC adaptor input port of the IV-SGVA directly. And the IV-SGVA does not recognize the difference between the battery and the AC power connected to the power input port, so that you can save the battery even though it is connected to the AC power port.

If the IV-SGVA recognizes that it is a battery connected to the power input port of the IV-SGVA then this "2.SAVE AC" function is not needed. But the IV-SGVA does not recognize the difference, and this "2.SAVE AC" function is needed separately from "3.SAVE BAT". In the case that you want to record objects passing once and quickly before the IV-SGVA, then turn off this function.

It can also extend the lifetime of the external battery pack (SG-938) provided by our company by setting this function to ON.

Caution: Set it to off when using the Bluetooth.

4-7-2-3. SAVE BAT: ON

This function is to save the battery by using the low-powering technology. If there is no motion then the IV-SGVA goes into the sleep-mode. After 2 seconds have elapsed, the IV-SGVA wake up and check if there is a motion. If there is no motion then the IV-SGVA goes into sleep-mode again, but if there is a motion then the IV-SGVA start to record. This low-powering technology is very important when you are using the battery as power source for the IV-SGVA. In the case that you want to record objects passing once and quickly before the IV-SGVA, then turn off this function.

Caution: Set it to off when using the Bluetooth.

4-7-2-4. ULTRA SAV: ON

When you set this function to on, then you can maximize the battery usage time.

If this function is on, then the IV-SGVA starts to record only if it detects audio not a movement, so the IV-SGVA does not record even if there is a movement.

Caution: Set it to off when using the Bluetooth.

4-7-2-5. VIDEO TIME: 2

You need to set the "VIDEO TIME" (0-9 seconds) to record the images when the camera detects motions. For example, if you set the "VIDEO TIME" to 2, then the IV-SGVA starts to record the images from the camera for 2 seconds as soon as it detects a motion. But if it detects another motion during recording the image for the previously detected motion, then the recording time for that newly detected motion automatically becomes another whole set value of 2 seconds.

Caution: If you set this time to 0, then the IV-SGVA will not record any images when it detects motions.

4-7-2-6. AUDIO TIME: 2

This function sets for the audio recording time (0-9 seconds). When "AUDIO DET" is set to off, then the IV-SGVA starts to record audio only in the case that the IV-SGVA detects both the motions from the camera and sounds by the microphone. When "AUDIO DET" is set to on, then the IV-SGVA starts to record audio when the IV-SGVA detects sounds from the microphone regardless of the motions detected from the camera. Audio recording time set is the same as with the above "Video Recording Time Set".

Option ON/OFF	Video Detection	Audio Detection	Record Audio
AUDIO DET:OFF	YES	YES	YES
AUDIO DET:OFF	YES	NO	NO
AUDIO DET:OFF	NO	YES/NO	NO
AUDIO DET:ON	YES/NO	YES	YES

Caution: If you set this time to 0, then the IV-SGVA will not record the sound even if it detects sound.

7. AUDIO DET: OFF

This function decides on the audio recording methods. If this function is on, then the IV-SGVA starts to record sounds when it detects the sounds regardless of the motions detected from the camera. If this value is off, then the IV-SGVA starts to record audio only in the case that the IV-SGVA detects both the motions by the camera and sounds by the microphone. When this value is set to CON, IV-SGVA will record audio continuously regardless of whether it detects an audio or not.

4-7-2-8. ON/OFF INFO

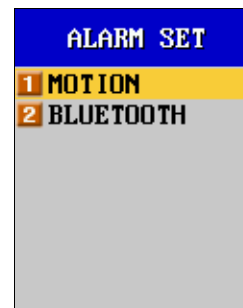
Shows up to 10 last history of power ON/OFF. The date and time is recorded for each power on and off. If the power of the IV-SGVA is gone abnormally such as, detaching the battery from the IV-SGVA during the operation, then the IV-SGVA will not record it in the power off history.

```
> 04/11 14:00:06
> 04/11 12:02:34
< 04/11 12:02:12
> 04/11 11:57:10
< 04/11 11:56:31
> 04/11 11:51:19
> 04/11 11:43:29
> 03/10 14:19:51
< 03/06 10:19:57
> 03/06 10:14:55
```

The black colored date/time (> 03/10 14:19:51) indicates you of the time that you turned on the IV-SGVA. The blue colored date/time (< 04/11 11:56:31) indicates you of the time that you turned off the IV-SGVA.

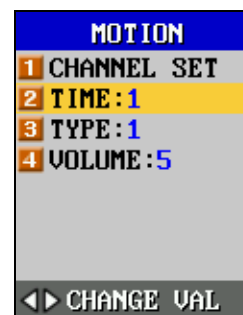
4-7-3. ALARM SET

If you set the alarm volume too loud, then that sound may be louder than the audio detected by the IV-SGVA's internal microphone and the IV-SGVA may not record the audio accordingly. Be cautious when you set the volume to high level.



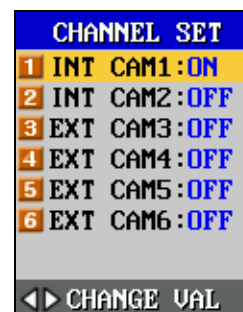
4-7-3-1. MOTION

Set up for alarm functions when the IV-SGVA detects motions by the camera.



1. CHANNEL SET

Turns ON/OFF the alarm for each camera when the IV-SGVA detects motion by the each camera.



2. TIME: 1

When a motion is detected by the camera then the IV-SGVA generates an alarm from the internal speaker. The duration of the alarm is from 0.2 to 9 seconds.

3. TYPE: 1

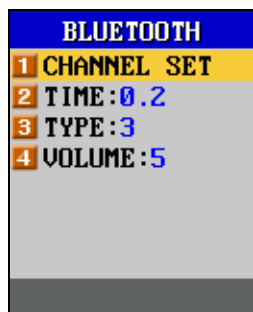
Set types for the alarm when a motion is detected by the camera. There are 5 different types for the alarm (1 - 5).

4. VOLUME: 2

Set the volume for the alarm when a motion is detected by the camera. There are 9 different levels for the volume (1 - 9).

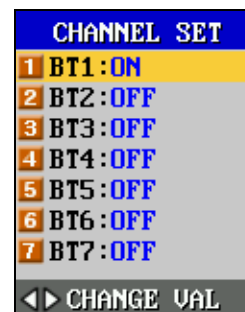
4-7-3-2. BLUETOOTH (IV-SGVA-300/310 only)

Set the alarm function for each Bluetooth channel when there is a motion detected by the camera of the IV-SGVAs which are connected wirelessly via Bluetooth.



1. CHANNEL SET

Turns ON/OFF the alarm for each Bluetooth channel when there is a motion detected by the camera of the IV-SGVAs which are connected wirelessly via Bluetooth.



2. TIME: 1

When there is a motion detected by the camera of the IV-SGVAs which are connected wirelessly via Bluetooth, the IV-SGVA generates an alarm from the internal speaker. The duration of the alarm is from 0.2 to 9 seconds.

3. TYPE: 3

Set the type for the alarm when there is a motion detected by the camera of the IV-SGVAs which are connected wirelessly via Bluetooth. There are 5 different types for the alarm (1 - 5).

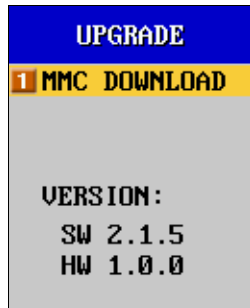
4. VOLUME: 5

Set the volume for the alarm when there is a motion detected by the camera of the IV-SGVAs which are connected wirelessly via Bluetooth. There are 9 different levels for the volume (1 - 9).

4-7-4. LANGUAGE: ENG

This is to select the language to be displayed in the menu. ENG is for the menu in English, and KOR is for Korean.

4-7-5. UPGRADE



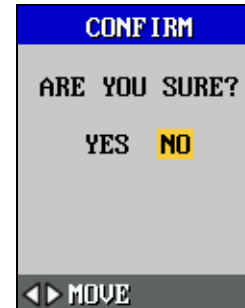
"UPGRADE" is to upgrade the IV-SGVA's software to its latest version by internet. To access this upgrade function, IV-SGVA must be connected with Internet (LAN) or it should have RS-MMC memory card inserted into the unit. IV-SGVA must be connected with AC/DC adaptor, and the battery lamp must be flashing with green light in order to process this UPGRADE function.

"Version" indicates of the IV-SGVA's version for its software and hardware.

1.MMC DOWNLOAD

This function can be used only with the RS-MMC memory card for the use of upgrades. You can make a RS-MMC memory card to be upgradeable by copying an upgrade file or a version file for each model to the RS-MMC card's route directory. Insert that upgradeable RS-MMC memory card into the memory card slot on the unit, and select "2.MMC DOWNLOAD", then the IV-SGVA automatically changes its version to its latest. After that, IV-SGVA reboots and finishes upgrading process.

4-7-6. DEFAULT SET



This function is to change the values set in all the menus back to its default set. Select "YES" and press [ENT] to change all the values to the "DEFAULT SET". Note that all the values changed by the user will be deleted once you change the values back to the "DEFAULT SET".

4-7-7. SG NAME

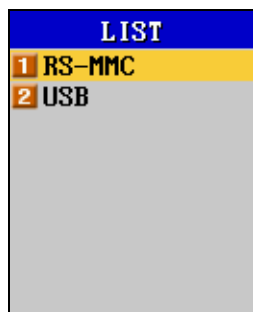


This function is to put in the IV-SGVA's name, and used to back up the data of many IV-SGVAs to the RS-MMC or USB memory devices (USB Memory or USB Hard Disk). IV-SGVA creates a directory name by the date, and the file name by the time. So, if there already exists a directory name backed up to the RS-MMC or USB memory from another IV-SGVA, and you want to back up a directory created on the same date by another IV-SGVA, then the existing directory name in the RS-MMC or USB memory gets over-written by the new data from the other IV-SGVA. To prevent this when you are backing up the data to the RS-MMC or USB memory devices, you need to make a name for each IV-SGVA, and create directory names for all the IV-SGVAs in the

USB memory in order to back up the data to the RS-MMC or USB memory under the correct IV-SGVA's name in the RS-MMC or USB memory devices. Of all the data in the USB memory backed up from the IV-SGVAs, IV-SGVA is designed to search only for the file, which has the same directory name in your IV-SGVA and in the RS-MMC or USB memory device. But, you can search the data of other IV-SGVAs backed up in the RS-MMC or USB memory device with your IV-SGVA if you change your IV-SGVA's name to that specific IV-SGVA's, which you want to search with. Then the searching program recognizes your IV-SGVA as the other, and you can search the data of the other IV-SGVA.

You can change the name by using the direction buttons. Press [ENT] to save the changed name, and press [ESC] to cancel the changed name.

RS-MMC or USB memory devices must be inserted into the IV-SGVA when you want to search for SG names registered in those devices. Select a SG name and press ENT button to search for a file under the selected SG name.



Select either RS-MMC or USB and press ENT button to check the SG names registered in each device.

I-5. BLUETOOTH (IV-SGVA-300/310 only)

When using the Bluetooth, you can get faster image transmitting speed by setting the image compress resolution to 128x128 for the slave IV-SGVAs. The transmitting speed goes down as you increase the image compress resolution and set it higher than 128x128. It is recommended to set the image compress resolution to 128x128 when using the Bluetooth.

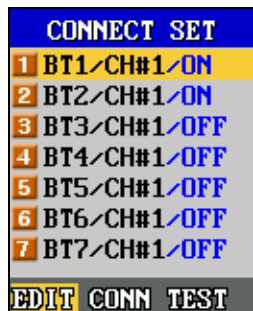


Select "BLUETOOTH" using the direction buttons, and press [ENT]. Then the next screen appears in the LCD as below. To go to the previous menu, press [ESC].



5-1. CONNECT SET

This function is to connect a master IV-SGVA to seven (7) other slave IV-SGVAs wirelessly via Bluetooth, and "1.CONNECT SET" can only be activated when you select "B.M/S:MASTER" as MASTER. Move the cursor to "1.CONNECT SET", and press [ENT], then a new window appears with seven Bluetooth Numbers (BT1-BT7) that you have logged in or the default set of IDs. These Bluetooth numbers are composed of the Bluetooth ID, camera channel number, and automatic connection ON/OFF information.



Select a Bluetooth number that you want to connect with your IV-SGVA using [△] and [▽], and select “CONNECT” using [◀] and [▶] and then press [ENT] to start the connection. If you want to change a slave IV-SGVA's Bluetooth ID, camera channel number, and automatic connection ON/OFF information, use [△] and [▽] to select that Bluetooth number. Use [◀] and [▶] to select “EDIT” and press [ENT], then a new window appears as below.



1. CONNECT: ON

You can turn ON or OFF the automatic connection function via Bluetooth when you go into the “RECORD” or “TRANSMIT” mode.

2. REQ CAMERA: 1

If you connect to a slave IV-SGVA wirelessly via Bluetooth, then you can request a certain camera number to be transmitted from the slave IV-SGVA wirelessly via Bluetooth to your IV-SGVA. For example, if you select 2 for the “REQ CAMERA”, then you get images from the camera channel number 2 transmitted to your master

△]

IV-SGVA. If the camera channel number you have requested is not turned on, then the slave IV-SGVA will send the images of the camera channel which is turned on and nearest to the requested channel number.

3. SLAVE PWD SET

If “5.BLUETOOTH” in “a.PASSWORD SET” from “F. OTHERS” is set to ON for the slave IV-SGVA and requires you to input password, then you have to put in the correct password to access the slave IV-SGVAs wirelessly via Bluetooth with your master IV-SGVA. But if you have logged in the password beforehand, then you do not have to input the password when you connect to the slave IV-SGVAs via Bluetooth. If you press [ENT], then the next screen appears in the LCD as below. Put in the password for the slave IV-SGVA which you want to access for, and press [ENT].



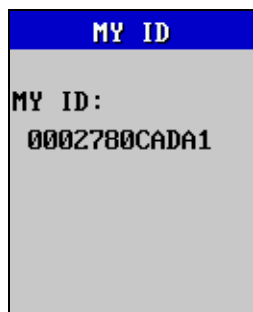
4. 40:02:78:0C:60:C5

This is Bluetooth ID and you can change this ID using the direction buttons.

5-2. M/S: MASTER

The IV-SGVA selected as a Master can be simultaneously connected to seven (7) different slave IV-SGVAs at the same time. Use [◀] and [▶] to set the IV-SGVAs either as a MASTER or a SLAVE. “A.CONNECT SET” can only be activated when you select “B.M/S:MASTER” as MASTER.

5-3. MY ID



This function is to find the Bluetooth ID for your IV-SGVA. When you want to connect to the slave IV-SGVAs with your master IV-SGVA, then you need to know the Bluetooth ID of the slave IV-SGVA. You can confirm those Bluetooth IDs by checking from "C.MY ID" of the slave IV-SGVAs and then connect to the slave IV-SGVAs.

5-4. AUDIO: BT1

This function is to choose one Bluetooth channel to hear the audio from, once you are connected to several slave IV-SGVAs via Bluetooth (BT1-BT7).

5-5. AUTO CONN: OFF

This function is to set ON or OFF the automatic connection option when the wireless connection via Bluetooth got lost caused by poor wireless network environments. The options for this function are OFF, 1-9, and OFF. If you set it with a number between 1 and 9, then the IV-SGVA automatically tries to reconnect to each other for that selected number of times, and stops after those number of trials. If it is set to OFF, then the IV-SGVA does not try to reconnect even after it gets disconnected. If you set this function to ON, then the IV-SGVA will try to connect to other IV-SGVAs until it gets reconnected.

5-6. POWER: OFF

This function turns ON or OFF the power for the Bluetooth. Turn it on to access the Bluetooth. Be sure to turn it off when you are not using the Bluetooth function to save the battery.

II. Search and Playback Program

You can copy the data saved in the IV-SGVA to the RS-MMC or USB Memory, and then copy this data to your computer. And you can search and playback the data with this program.

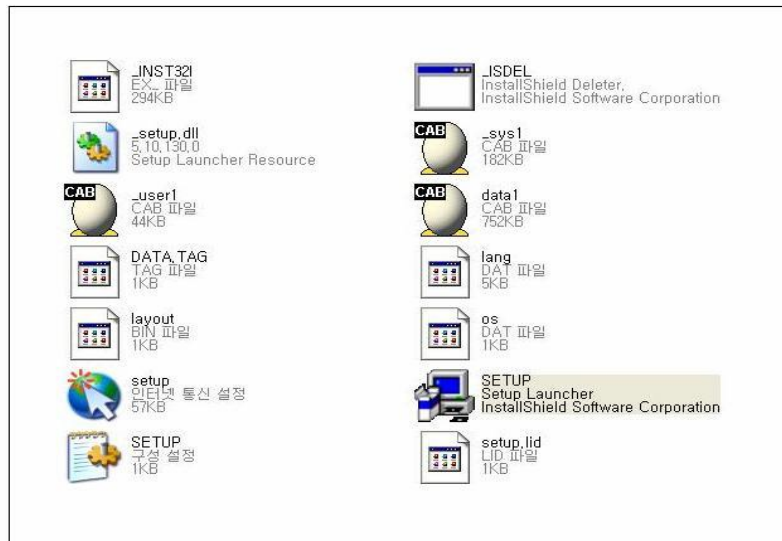
After installing the program in your computer, you will see an icon for the program. Point the mouse to this icon, and double-click the left side of the mouse. You will see a window as below.



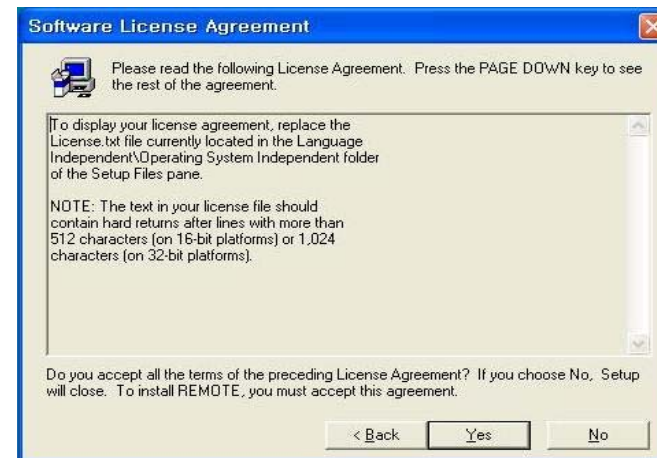
You can install the program to your computer with the provided CD.

II-1. How to install

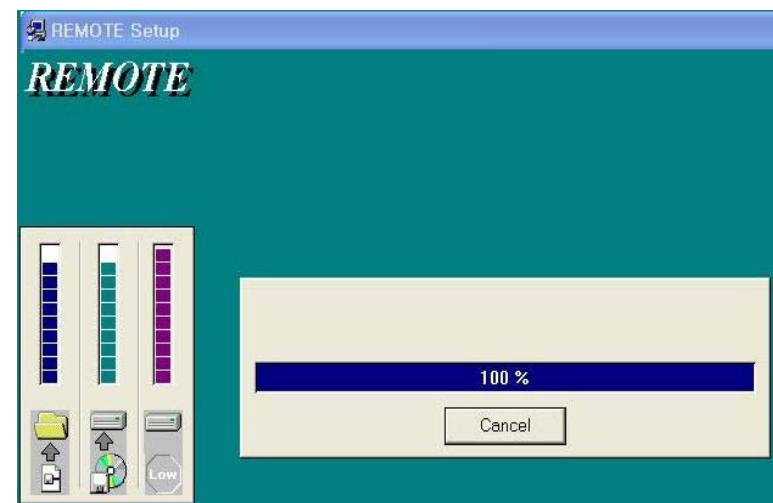
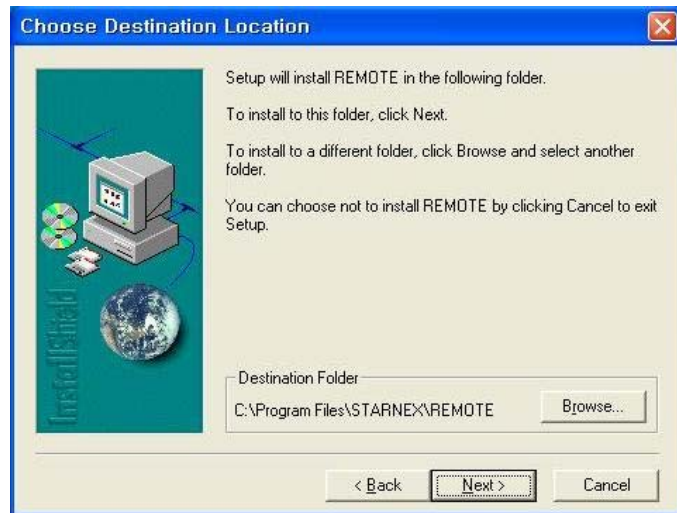
Insert the CD into the CD-ROM, and check the files below.



To install the program, double-click SETUP icon. Then a new window appears as below, and starts installing the program.

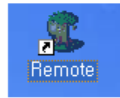


Type in the serial number and you can get this number from the back of your IV-SGVA where the battery is placed in.



When the processes above are finished, then the program installment is completed.

Now you will see an icon for the program on the ground screen.

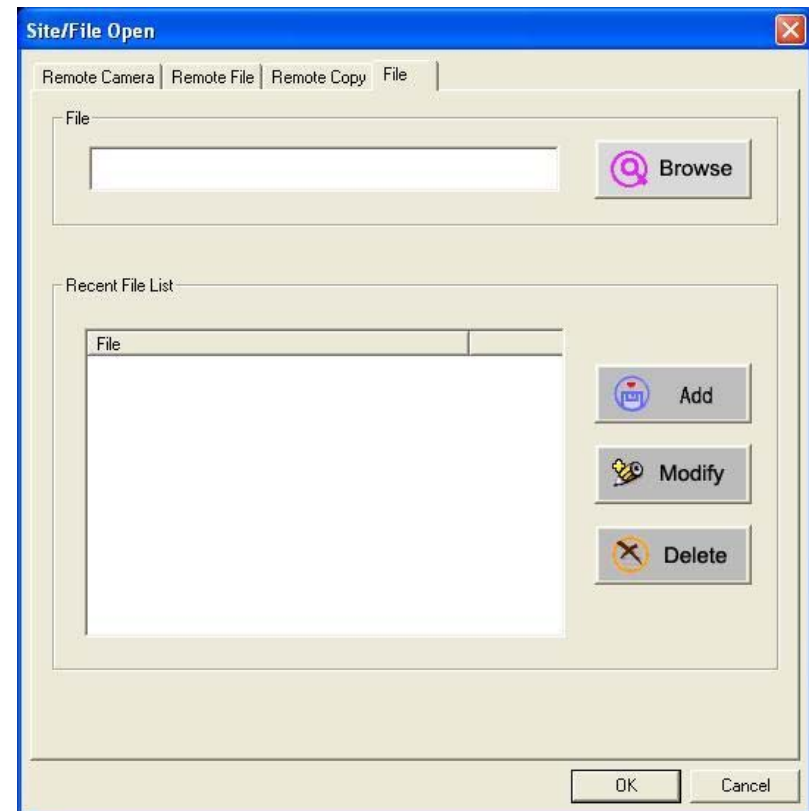


Point the mouse to this icon, and double-click left side of the mouse, then a new window appears as below and starts the program.



II-2. Data Search and Playback

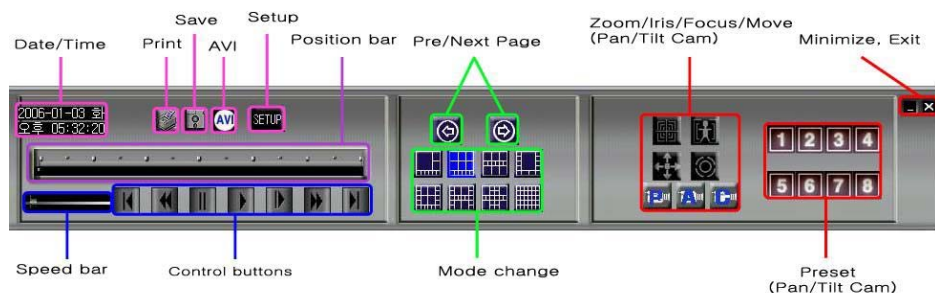
Of the many windows, move the mouse point to the window that you want to playback and click the right side of the mouse, then a new window appears as below.



This function enables you to playback the file, which is stored in your computer. You can use the speed bar and the control buttons while you playback the file.

Click "Browse" and select the folder and file that you want to playback, and then click "OK". For example, select "C:\Self-Guard\20040701\03050701.sgv" and then click "OK".

II-3. Other functions



a. SETUP

You can on and off the title to display the "Play status", "Date/Time".

b. Date/Time

Shows the date and time of your computer

c. Print , Save

If you pause the video, then you can print or save an image in JPEG format. Also, you can print the file with the extension name of "snp", or save it in the JPEG format.

d. Position bar, Speed bar

The position bar is one hour long, and indicates of the current position of the whole playback time. "Speed bar" is to control the speed of the playback.

e. Control buttons

These control buttons are to control the following functions when you playback the file saved in your computer; Playback, Playback frame by frame, Fast-rewind, Fast-forward, Go to the start of the file, Go to the end of the file.

f. Mode change

You can decide how many images to be displayed on your computer's monitor. There are 8 displaying modes when viewing the images of the IV-SGVA from your computer. If you want to magnify a certain image, then point the mouse to that image and click the left side of the mouse. If you click on that magnified image again, then the image returns to the previous size.

g. Pre/Next page

At each displaying mode, if you want to see other channels instead of the current channels on the monitor, click this button to go to the previous or to the next page.

h. AVI Conversion

This is to convert a file for the use of IV-SGVA to a file in AVI format.

Click on the "OPEN" button to select a file to be converted to AVI file format and click "CONVERT".

i. Zoom/Iris/Focus/Move (Reserved)

This function controls of pan, tilt, and camera with a zoom function (zoom, iris, focus, move), and is reserved for later use.

j.Preset(Reserved)

This function can preset eight different positions of the pan, tilt, and a camera with a zoom function, and is reserved for later use.

k.Minimize/Exit

"Minimize" is to minimize the window of the File Search and Playback Program, and "Exit" is to exit from the Program.

III. OTHERS

III-1. How to use Button Camera (SG-110, SG-210, SG-310 model only)

1. Press [ENT] for 2 seconds to turn on the power.
2. Connect IV-SGVA with Button Camera through the port in the body "Connector with Docking".
3. Use [◀] and [▶] to change **3.EXT CAM3: OFF to ON**. ("OPTION" -> 1.CAMERA SET -> 3.EXT CAM3: OFF) (When not using internal camera(s), turn OFF 1.INT CAM1).
4. Use [◀] and [▶] to change **3.EXT MIC: OFF to ON**. ("OPTION" -> 2.RECORD SET -> 3. EXT MIC: OFF)
5. In the main menu, select "1.RECORD" and press [ENT] to record audio and video of button camera.
6. When removing button camera from IV-SGVA, **turn ON "1.INT CAM1"** ("OPTION" -> 1.CAMERA SET -> 1.INT CAM1: OFF) **and "2.INT MIC"** ("OPTION" -> B.RECORD SET -> 2.INT MIC: OFF) to reactivate internal camera and microphone.

TROUBLESHOOTING GUIDE

- **IV-SGVA shuts down its power for no reason automatically**

The IV-SGVA automatically turns off the power or goes into the power-savings mode if you don't press any button for a certain amount of time (1-9 minutes). This does not indicate malfunction of the system.

In "RECORD" and "TRANSMIT" modes, IV-SGVA turns off only the LCD, battery status LAMP, and recording status LAMP to save the battery. But, in the rest of the modes except for "RECORD" or "TRANSMIT", it turns off the power completely. Set the time to 0 to deactivate "AUTO POWER OFF" function.

Caution: To maximize the life of the battery, do not turn off "AUTO POWER OFF" function.

- **Battery power fades quickly.**

1. When you are not using the Bluetooth, set "POWER" to off from the menu "BLUETOOTH". (IV-SGVA-300310 only)
2. In the menu "OPTION", select "SAVE BAT" from the menu "POWER SET" of the menu "OTHERS", and set on "SAVE BAT".

- **If I connect the IV-SGVA with the adaptor, then the IV-SGVA turns on its power automatically.**

IV-SGVA has a function named, "automatic recovery function", and it automatically turns on its power when it is provided with external power sources. If there is an electricity (a power) failure, IV-SGVA automatically starts to use the power from its battery. But the IV-SGVA turns off its power, when it is not provided with the power from the adaptor for a long time, and uses up the whole battery. And as soon as the electricity is available to the IV-SGVA, it automatically starts to charge the battery with electricity, and returns back to the modes just before it turned off its power ("RECORD", "TRANSMIT", or to the initial mode). This function is very useful when you have installed the IV-SGVA in the remote places far away from you. In the case that you have installed the IV-SGVA in remote places, and there happens an electricity failure for some time and the electricity gets available to the IV-SGVA again, then you have to go to where the IV-SGVA is placed to turn it on, and to set it to the "RECORD" or

“TRANSMIT” modes. But the IV-SGVAs have this “automatic recovery function”, and free the users from the burden.

- **IV-SGVA's image from the camera or recorded images are blurred.**

It may happen when there is dust or other particles on the camera lens, so you should carefully wipe out those dust and other particles at times with the rolled up soft fabrics or tissue.

Warranty Guide

This product has passed through quality control and testing. If this product shows any manufacturer's defects during normal use, then there is a 12 months warranty service period from date of purchase. Check this warranty sheet first. Please contact the distributor or dealer after checking out any problems in the product. The standard for repairing, replacement or reimbursement follows Customer.

Warranty Content

Any defects under normal use within the warranty service period we give you free repair service according to the warranty sheet.

We charge you with the fee of parts and services despite free warranty service period.

1. Any breakage made without care.
 2. Breakage or trouble made by natural disaster.
 3. Breakage or trouble made by breaking the product guide or manual.
 4. Breakage or trouble made by wrong power voltage or frequency.
 5. When you want to resemble for full system or replace parts within warranty service period.
 6. When unauthorized engineer modified or made damage on the product trying to repair it, we may charge you with the fee.
- We don't support the breakage after warranty service period. If the customer wants to get it repaired, we charge them with the fee.

Product Warranty Service Sheet

Product & Model name		
Product serial number		
Distributor or Agency		
Date you purchased		
Warranty period		12 months
Customer	Name	
	Address	

* This warranty sheet may not be provided again.

* Please fill out this sheet as soon as you purchase the product.

* You should show this warranty service sheet when you get a warranty service.